

10/507,444

(FILE 'HOME' ENTERED AT 20:15:19 ON 17 SEP 2005)

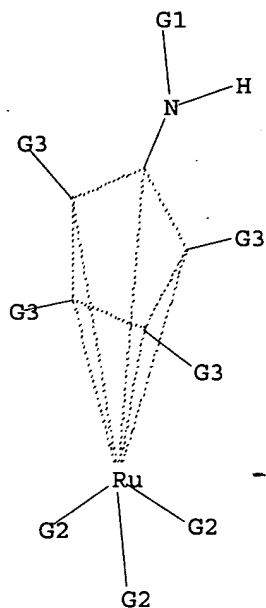
FILE 'REGISTRY' ENTERED AT 20:15:59 ON 17 SEP 2005

L1 STRUCTURE UPLOADED

=>.d l1

L1 HAS NO ANSWERS

L1 STR



G1 H, Co, Ak

G2 H, C, P, X

G3 Me, Et, n-Pr, i-Pr, n-Bu, i-Bu, s-Bu, t-Bu, Ph

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 20:16:35 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 5 TO ITERATE

100.0% PROCESSED 5 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 5 TO 234

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 20:16:43 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 86 TO ITERATE

100.0% PROCESSED 86 ITERATIONS

13 ANSWERS

SEARCH TIME: 00.00.01

L3 13 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

161.33

161.54

FILE 'CAPLUS' ENTERED AT 20:16:51 ON 17 SEP 2005
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FILE COVERS 1907 - 17 Sep 2005 VOL 143 ISS 13
FILE LAST UPDATED: 16 Sep 2005 (20050916/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3
L4 11 L3

=> d 1-11 bib abs

L4 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:320507 CAPLUS
DN 143:43954
TI Acceptorless, Neat, Ruthenium-Catalyzed Dehydrogenative Cyclization of Diols to Lactones
AU Zhao, Jing; Hartwig, John F.
CS Department of Chemistry, Yale University, New Haven, CT, 06520-8107, USA
SO Organometallics (2005), 24(10), 2441-2446
CODEN: ORGND7; ISSN: 0276-7333
PB American Chemical Society
DT Journal
LA English
AB The dehydrogenation of 1,4-butanediol to γ -butyrolactone catalyzed by soluble Ru complexes without solvent or a H acceptor is reported. An alkylphosphine version of Ru bis-phosphine diamine catalysts was prepared and is the longest-lived catalyst for the conversion of 1,4-butanediol to γ -butyrolactone. The catalytic production of γ -butyrolactone from 1,4-butanediol with this catalyst is simple to conduct, environmentally friendly, and highly efficient.
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:99449 CAPLUS
DN 142:197677
TI Method of preparation of optically active alcohols
IN Kim, Mahn-Joo; Park, JaiWook; Chung, Yong Il; Choi, Jun Ho; Lee, Han Ki; Choi, Yoon Kyung; Kim, Daeho
PA Postech Foundation, S. Korea; Posco
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|---|----------|-----------------|----------|
| PI | WO 2005009935 | A1 | 20050203 | WO 2003-KR1494 | 20030725 |
| | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, | | | |

LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI WO 2003-KR1494

20030725

OS CASREACT 142:197677; MARPAT 142:197677

AB The present invention relates to a method for preparing chiral alc. having optical activity. More specifically, the present invention relates to a method for preparing (S)-chiral alc. with a high yield and a high optical purity by mixing achiral substrates such as racemic alc. or ketone with a combination of metal catalyst and protein hydrolase to perform a dynamic kinetic resolution reaction. Thus, to a Schlenk flask, 3.7 mg (Ph₄C₅NHCHMe₂)Ru(CO)₂Cl and 18 µl t-BuOK solution (1 M in THF) was added and dried under the reduced pressure, followed by adding 1 mL toluene and then the resulting mixture was agitated for 1 h. After the toluene was removed under the reduced pressure, 9 mg stabilized subtilisin, 31.8 mg Na₂CO₃, 18 µL 1-phenylethanol, 39 µL 2,2,2-trifluoroethyl butyrate, and 0.5 mL THF were added and the mixture was agitated at room temperature for 3 days. After termination of the reaction, catalyst was filtered, the obtained filtrated solution was concentrated and separated using column chromatog. (silica gel, Et acetate/ hexane = 4:1) to give (S)-1-phenylethyl butyrate (I) % yield and optical purity 92% ee. (S)-(-)-phenylethanol was obtained by adding I and 2 equiv of K₂CO₃ to 80% methanol solution and hydrolyzing at room temperature

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:642075 CAPLUS

DN 142:56490

TI Synthesis of aminocyclopentadienyl ruthenium chloride

AU Karvembu, Ramasamy; Choi, Jun Ho; Park, Jaiwook

CS Department of Chemistry, Pohang University of Science and Technology (POSTECH), Pohang, 790-784, S. Korea

SO Inorganic Chemistry Communications (2004), 7(8), 988-989

CODEN: ICCOFP; ISSN: 1387-7003

PB Elsevier B.V.

DT Journal

LA English

OS CASREACT 142:56490

AB The reaction of Ru₃(CO)₁₂ with N-isopropyl-2,3,4,5-tetrabutylcyclopenta-2,4-dienimine led to the formation of [2,3,4,5-Bu₄(η⁵-C₄CNHiPr)]Ru(CO)₂Cl. The new complex has been characterized by ¹H NMR, ¹³C NMR, IR and mass spectral data.

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:292259 CAPLUS

DN 141:6847

TI Lipase-catalyzed domino dynamic kinetic resolution of racemic 3-vinylcyclohex-2-en-1-ols/intramolecular Diels-Alder reaction: One-pot synthesis of optically active polysubstituted decalins

AU Akai, Shuji; Tanimoto, Kouichi; Kita, Yasuyuki

CS Graduate School of Pharmaceutical Sciences, Osaka University, Suita, Osaka, 565-0871, Japan

SO Angewandte Chemie, International Edition (2004), 43(11), 1407-1410

CODEN: ACIEF5; ISSN: 1433-7851

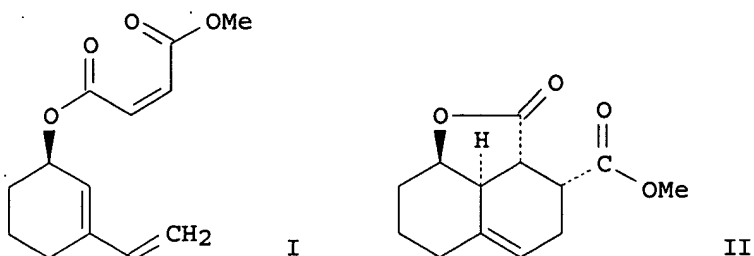
PB Wiley-VCH Verlag GmbH & Co. KGaA

DT Journal

LA English

OS CASREACT 141:6847

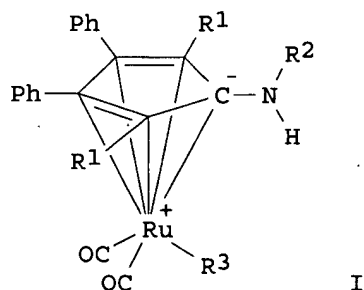
GI



AB The use of a lipase and a ruthenium catalyst allows the direct preparation of polysubstituted decalins with high optical and chemical yields from racemic alcs. The lipase-catalyzed kinetic resolution of the racemic alcs., the ruthenium-catalyzed racemization of the slow-reacting enantiomers, and an intramol. Diels-Alder reaction of the resultant esters all occur under identical conditions. For example, the *Candida antarctica* lipase-catalyzed kinetic resolution and transesterification of 3-ethenyl-2-cyclohexen-1-ol with (2Z)-2-butenedioic acid 1-ethoxyethenyl Me ester gave a (2Z)-butenedioic acid [(1R)-3-ethenyl-2-cyclohexen-1-yl] ester (I) which was not isolated, but directly subject to cycloaddn. conditions. The di- μ -chlorodichlorobis[(1,2,3,4,5,6- η)-1,3,5-trimethylbenzene]diruthenium-catalyzed intramol. Diels-Alder reaction of I thus gave to give a decalin, i.e., (-)-(2aS,3R,8aR,8bS)-2a,3,4,6,7,8,8a,8b-octahydro-2-oxo-2H-naphtho[1,8-bc]furan-3-carboxylic acid Me ester (II).

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:121151 CAPLUS
DN 140:321067
TI Aminocyclopentadienyl ruthenium complexes as racemization catalysts for dynamic kinetic resolution of secondary alcohols at ambient temperature
AU Choi, Jun Ho; Choi, Yoon Kyung; Kim, Yu Hwan; Park, Eun Sil; Kim, Eun Jung; Kim, Mahn-Joo; Park, Jaiwook
CS National Research Laboratory of Chirotechnology, Department of Chemistry, Division of Molecular and Life Sciences, Pohang University of Science and Technology, Pohang, 790-784, S. Korea
SO Journal of Organic Chemistry (2004), 69(6), 1972-1977
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
GI



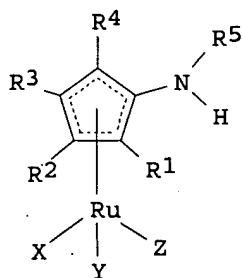
AB Aminocyclopentadienyl ruthenium complexes I [R1 = Ph; R2 = i-Pr (II), n-Pr, t-Bu, Ph, 4-O2NC6H4, 4-ClC6H4, 4-MeOC6H4, 4-Me2NC6H4; R3 = Cl; R1 = Me; R2 = i-Pr (III), Ph; R3 = Cl] which can be used as room-temperature racemization catalysts with lipase in the dynamic kinetic resolution (DKR) of secondary alcs., were synthesized from iminocyclopenta-2,4-dienes, Ru3(CO)12, and CHCl3. The racemization of (S)-4-phenyl-2-butanol showed that III was the most active catalyst, although the difference decreased in the DKR. II was used in the DKR of various alcs. such as allylic alcs., alkynyl alcs., diols, hydroxy esters, and chlorohydrins, which were

successfully transformed to chiral acetates. Mechanistic studies for the catalytic racemization, indicated that ruthenium hydride I [R1 = Ph; R2 = i-Pr; R3 = H (IV)] was the key species in the reaction. IV was the major organometallic species in the racemization of (S)-1-phenylethanol with II and potassium tert-butoxide. In a sep. experiment, (S)-1-phenylethanol was racemized catalytically by IV in the presence of acetophenone.

RE.CNT 109 THERE ARE 109 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:737767 CAPLUS
DN 139:246121
TI Preparation of aminocyclopentadienyl ruthenium complexes as racemization catalyst of chiral compound
IN Park, Jaiwook; Kim, Mahn-joo; Choi, Jun Ho; Ahn, Yangsoo
PA Postech Foundation, S. Korea
SO PCT Int. Appl., 14 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | WO 2003076449 | A1 | 20030918 | WO 2002-KR925 | 20020517 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | KR 2003073987 | A | 20030919 | KR 2002-13809 | 20020314 |
| | CA 2478410 | AA | 20030918 | CA 2002-2478410 | 20020517 |
| | EP 1483275 | A1 | 20041208 | EP 2002-728243 | 20020517 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| PRAI | KR 2002-13809 | A | 20020314 | | |
| | WO 2002-KR925 | W | 20020517 | | |
| OS | CASREACT 139:246121; MARPAT 139:246121 | | | | |
| GI | | | | | |



I

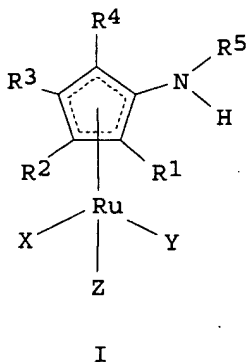
AB Preparation of novel aminocyclopentadienyl ruthenium complexes, I (R1-R4 = independently Ph, C1-5 alkyl substituted Ph, etc.; R5 = H, Ph, C1-5 alkyl substituted Ph, C1-5 alkyl, C3-7 cycloalkyl, C2-5 alkenyl, C2-5 alkynyl, etc.; X, Y, Z = independently H, halo, carbonyl, phosphine), useful as catalyst for racemization of chiral compound is described. Thus, TiCl4-mediated reaction of tetraphenylcyclopentadienone with isobutylamine

in PhMe gave N-isobutyl-2,3,4,5-tetraphenylcyclopentadieneimine which on treatment with Ru₃(CO)₁₂ gave N-isobutylamino-2,3,4,5-tetraphenylcyclopentadienyl ruthenium dicarbonyl chloride (II). Reaction of II with Na₂CO₃ in iPrOH gave N-isobutylamino-2,3,4,5-tetraphenylcyclopentadienyl ruthenium dicarbonyl hydride (III). II and III were used as chiral catalyst for racemization of (S)-1-phenylethanol.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:737708 CAPLUS
DN 139:261424
TI Resolution of chiral compounds using aminocyclopentadienyl ruthenium catalysts
IN Park, Jaiwook; Kim, Mahn-joo; Choi, Jun Ho; Ahn, Yangsoo
PA Postech Foundation, S. Korea
SO PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2003076384 | A1 | 20030918 | WO 2002-KR926 | 20020517 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| KR 2003074851 | A | 20030922 | KR 2002-13832 | 20020314 |
| CA 2478408 | AA | 20030918 | CA 2002-2478408 | 20020517 |
| EP 1483229 | A1 | 20041208 | EP 2002-728244 | 20020517 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| US 2005130282 | A1 | 20050616 | US 2003-507727 | 20020517 |
| PRAI KR 2002-13832 | A | 20020314 | | |
| WO 2002-KR926 | W | 20020517 | | |
| OS CASREACT 139:261424; MARPAT 139:261424 | | | | |
| GI | | | | |



AB A chiral compound, particularly a chiral secondary alc., can be efficiently resolved under a mild condition by acylation with an alkenyl acetate in the presence of a novel aminocyclopentadienyl ruthenium complexes, I (preparation given; R₁-R₄ = (un)substituted Ph, C₁-5 alkyl, etc.; R₅ = H, (un)substituted Ph, C₁-5 alkyl, C₃-7 cycloalkyl, C₂-5 alkenyl, C₂-5 alkynyl, etc.; X, Y, Z = H, halo, CO, organophosphine), an enzyme catalyst, and a base. Thus, TiCl₄-mediated reaction of

tetraphenylcyclopentadienone with isobutylamine in PhMe gave N-isobutyl-2,3,4,5-tetraphenylcyclopentadieneimine which on treatment with Ru₃(CO)₁₂ gave title catalyst, N-isobutylamino-2,3,4,5-tetraphenylcyclopentadienylruthenium dicarbonyl chloride (II). II catalyzed resolution of 1-phenylethanol in presence of Na₂CO₃/KOBu-t/Candida antarctica lipase B and isopropenyl acetate gave 97% (R)-1-phenylethyl acetate with 99% enantiomeric excess.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:679376 CAPLUS

DN 139:337584

TI (S)-Selective Dynamic Kinetic Resolution of Secondary Alcohols by the Combination of Subtilisin and an Aminocyclopentadienylruthenium Complex as the Catalysts

AU Kim, Mahn-Joo; Chung, Yong Il; Choi, Yoon Kyung; Lee, Han Ki; Kim, Daeho; Park, Jaiwook

CS National Research Laboratory of Chirotechnology, Department of Chemistry, Division of Molecular and Life Sciences, Pohang University of Science and Technology, Kyongbuk, 790-784, S. Korea

SO Journal of the American Chemical Society (2003), 125(38), 11494-11495
CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

OS CASREACT 139:337584

AB A new procedure for the dynamic kinetic resolution (DKR) of racemic alcs. into single enantiomers is described. This procedure employs surfactant-treated subtilisin as an (S)-selective resolving catalyst and an aminocyclopentadienylruthenium complex as a racemizing catalyst. The DKR is performed best in the presence of an acyl donor such as trifluoroethyl butyrate in THF at room temperature. Eight simple secondary alcs. have been efficiently resolved with high optical purities and good yields. The subtilisin-based DKR is complementary in stereoselectivity to its lipase-based counterpart. For an acyl-carrying alc., both subtilisin- and lipase-based DKRs have proceeded equally well to give a pair of enantiomeric products (>99.5% ee each) with opposite optical rotations in high yields (94-95%).

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:74916 CAPLUS

DN 138:271794

TI Synthesis and Reactivity of Hydroxycyclopentadienyl and Aminocyclopentadienyl Ruthenium Alcohol Complexes

AU Casey, Charles P.; Vos, Thomas E.; Bikzhanova, Galina A.

CS Department of Chemistry, University of Wisconsin Madison, Madison, WI, 53706, USA

SO Organometallics (2003), 22(5), 901-903

CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

OS CASREACT 138:271794

AB Cationic aminocyclopentadienyl and hydroxycyclopentadienyl ruthenium alc. complexes were synthesized from reaction of the corresponding ruthenium chloride with AgBF₄ in the presence of an alc. Exchange rates of free alc. with hydroxycyclopentadienyl and aminocyclopentadienyl ruthenium benzyl alc. complexes were rapid (t_{1/2} = 5-10 min) at -47°.

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:772820 CAPLUS

DN 138:4680

TI Protonated Aminocyclopentadienyl Ruthenium Hydride Reduction of Benzaldehyde and the Conversion of the Resulting Ruthenium Triflate to a

Ruthenium Hydride with H₂ and Base

AU Casey, Charles P.; Vos, Thomas E.; Singer, Steven W.; Guzei, Ilia A.
 CS Department of Chemistry, University of Wisconsin Madison, Madison, WI,
 53706, USA
 SO Organometallics (2002), 21(23), 5038-5046
 CODEN: ORGND7; ISSN: 0276-7333
 PB American Chemical Society
 DT Journal
 LA English
 OS CASREACT 138:4680
 AB Reaction of N-phenyl-2,5-dimethyl-3,4-diphenylcyclopenta-2,4-dienimine (6) with Ru₃(CO)₁₂ formed two isomers of { [2,5-Me₂-3,4-Ph₂(η⁵-C₄CNHPh)]Ru(CO)(μ-CO)}₂ (8-trans and 8-cis). Photolysis of 8 under a H₂ atmosphere led to the formation of the aminocyclopentadienyl ruthenium hydride [2,5-Me₂-3,4-Ph₂(η⁵-C₄CNHPh)]Ru(CO)₂H (9-H). 9-H reduced benzaldehyde slowly at 75° to give benzyl alc. and 8. Protonation of 9-H with triflic acid produced { [2,5-Me₂-3,4-Ph₂(η⁵-C₄CNH₂Ph)]Ru(CO)₂H}OTf (11-H), which reacted rapidly with benzaldehyde at -80° to give benzyl alc. and [2,5-Me₂-3,4-Ph₂(η⁵-C₄CNHPh)]Ru(CO)₂OTf (9-OTf). Reaction of 9-OTf with H₂ and base led to the re-formation of 9-H. These reactions provide the transformations required for a catalytic cycle for hydrogenation of aldehydes.

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2002:548947 CAPLUS
 DN 137:311016
 TI Aminocyclopentadienyl ruthenium chloride: Catalytic racemization and dynamic kinetic resolution of alcohols at ambient temperature
 AU Choi, Jun Ho; Kim, Yu Hwan; Nam, Se Hyün; Shin, Seung Tae; Kim, Mahn-Joo; Park, Jaiwook
 CS National Research Laboratory of Chirotechnology Department of Chemistry Division of Molecular and Life Sciences, Pohang University of Science and Technology (POSTECH), Pohang, 790-784, S. Korea
 SO Angewandte Chemie, International Edition (2002), 41(13), 2373-2376
 CODEN: ACIEF5; ISSN: 1433-7851
 PB Wiley-VCH Verlag GmbH
 DT Journal
 LA English
 OS CASREACT 137:311016
 AB Novel racemization catalyst is prepared, [RuCl(CO)₂(η⁵-cyclo-C₅Ph₄NHCHMe₂)] (1), which improves dramatically the ruthenium-enzyme tandem dynamic kinetic resolution (DKR) of secondary alcs. The DKR proceeds at room temperature with isopropenyl acetate as an acyl donor and requires less lipase than with racemization catalysts described earlier. The structure of 1 was determined by x-ray diffraction.

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT